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BEACH, THOMAS A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,009	Applicant(s) KARLSSON ET AL.	
	Examiner THOMAS A. BEACH	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10 and 12-15 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: on the last line, "24" should be deleted. Appropriate correction is required.
2. Claim I also recites the limitation of the "at least one pair of rear contact zones" "disposed at the proximal end of the holder beak" in line 15, and these "rear contact zones" later including a "radial recess collar" "to extend around the proximal end of said replacement part." This is unclear whether the "rear contact zones" are part of the holder beak or the replacement part.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-10, and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kesavan et al H2020 H in view of Vinas Peya 5,819,391 and Robinson 5,491,915. Kesavan shows wearing parts system for a tool of an earth moving machine of the type which comprises a holder part (24), attached to the tool and comprising a holder beak (30), and replacement part (16), comprising a hollow, configured to grip the holder beak such that the holder beak is at least partially fitted,

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along a line of symmetry extending longitudinally through the holder beak, into the replacement part and further configured to be fixed therein by means of a locking mechanism (18), a plurality of mutually interacting pairs of contact elements, disposed on each of the holder part and the replacement part, substantially symmetrically offset from the line of symmetry (fig 5), having at least one pair of front contact zones disposed at the distal end of the holder beak and substantially symmetrically disposed on either side of the line of symmetry and at least one pair of rear contact zones configured to increasingly taper proximally with respect to the line of symmetry and disposed at the proximal end of the holder beak and substantially symmetrically disposed on either side of the line of symmetry (fig 3-5); and at least two interacting joints (36) comprising radial projections extending from the holder beak from each of the at least one pair of rear contact zones, and corresponding radial recesses disposed in the replacement part into each of the at least one pair of rear contact zones, wherein the at least two interacting joints are configured to provide a common rotational axis between them substantially perpendicular to the direction of fitting of the locking device and, wherein the recesses each comprise a projection end face wherein each recess end face and projection end face are configured to interact so as to limit the pushing on of the replacement part over the holder part and further configured to ensure that the contact area between each corresponding recess end face and projection end face is an initially small contact area at a common center of each of the radial projections and as the wear has progressed to the recess end face about the common center, that the contact area between each corresponding recess end face and projection end face is

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increased to a larger contact area, while at the same time the distance between the end faces of the interacting joints at their common center is substantially less than the distance between the end faces of the collars such that there is a play between the collars (fig 1-2).

Kesavan does not show the at least one pair of front contact zones further comprise a holder beak collar comprising an end face perpendicular with respect to the line of symmetry and configured to extend around the distal end of the holder beak between the radial projections, and wherein the at least one pair of rear contact zones further comprise a radial recess collar opposite the holder beak collar and comprising an end face perpendicular with respect to the line of symmetry and configured to extend around the proximal end of the replacement part between the radial recesses. However, Vinas Peya shows a similar wearing parts system for a tool of an earth moving machine of the type which comprises a holder part (3), attached to the tool and comprising a holder beak (8), and replacement part (1), comprising a hollow, configured to grip the holder beak such that the holder beak is at least partially fitted, along a line of symmetry extending longitudinally through the holder beak, into the replacement part and further configured to be fixed therein by means of a locking mechanism 7, additionally having a holder beak collar comprising an end face perpendicular with respect to the line of symmetry and configured to extend around the distal end of the holder beak between the projections (28), and wherein the at least one pair of rear contact zones further comprise a radial recess collar opposite the holder beak collar and comprising an end face perpendicular with respect to the line of symmetry and configured to extend around

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the proximal end of the replacement part between the recesses that receive the projections (28) as shown clearly in figures 5-6. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kesavan, as taught by Vinas Peya, to include the recess collars for the expected result of an improved engagement replacement part and the holder beak by including abutting faces (the claimed collars) to prevent twisting or loosening of the replacement part and/or fracturing of the parts due to stress during use.

Kesavan also does not show a locking mechanism inserted through both the holder part and the replacement part substantially perpendicularly with respect to the line of symmetry and substantially perpendicular to the insertion path of the locking mechanism into the holder part and the replacement part. However, Robinson shows a similar wear parts system having a locking mechanism 200 (fig 9A) through both the holder part and the replacement part substantially perpendicularly with respect to the line of symmetry and substantially perpendicular to the insertion path of the locking mechanism into the holder part and the replacement part. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kesavan, as taught by Robinson, to include this type of locking mechanism for the expected result of an improved engagement connector pin (col. 1, line 37+).

As concern claim 2, the combination shows the locking mechanism (Robinson, fig 9A) comprises at least one locking device, at least one locking device, comprising at least a first, a second and a third section wherein the first section is configured to have the widest cross section and the third section is configured to have the smallest cross

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section among the first, second and third sections, configured to be placed through interacting openings disposed within both the holder part and the replacement part, such that when the locking device is placed through the openings in the replacement part and the holder part, three longitudinal sections are defined in the openings, in which the first section is configured to have the widest cross section, whilst the third section of the locking device opening through which the locking device is lastly inserted is configured to have the smallest section (fig 9A or 27).

As concern claim 3, the combination shows the locking device comprises a rigid locking device body having an elastic material (Robinson 242) inlaid into the locking device body, wherein the material is configured to load at least one movable engagement part toward a predetermined position.

As concern claim 5, the combination shows in that the locking device (Robinson, fig 9A) comprises a hollow for the elastic material (242), which hollow has a first gap opening intended for the expansion of the elastic material when this is subjected to load during the removal of the locking device, and, in addition thereto, one or more further gap openings through which the particular engagement parts, in a state which for the locking device, is free from external loads, project a certain way beyond the body of the locking device.

As concern claim 6, the combination shows that the locking device opening through the beak of the holder part comprises a first portion in the direction of fitting which is at least wider in a first direction than a corresponding portion of the body of the fitted locking device (Robinson, fig 9A), which portion of the locking device opening

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comprises a first segment and a second segment, which first segment, which is wider than the corresponding locking device body in the the first direction, is designed to constitute a cavity intended for securing plate in its extended position blocking the locking device, whilst the second segment is designed to constitute, or form, a space intended for the expansion of the elastically deformable resilient material when this is subjected to load during the removal of the locking device.

As concern claim 7, the combination shows that connecting to the locking device (Robinson, fig 9A) opening through the hood of the tine part there is a pin disposed on the inner side of the roof of the hood, against which pin the securing plate of the locking device shall fix (fig 9A).

As concern claim 8, the combination shows a bevel, which widens downward in the direction of fitting of the locking device, is disposed on that side of the locking device body facing toward the the pin, so that the locking device body and the pin are free from contact with each other (Kesavan, fig 1-5).

As concern claim 9, the combination shows a cross section through the body of the fitted locking device level with the inner side of the roof of the hood consists of a homogeneous, solid, unbroken cross section or a cross section which is unbroken to the extent of at least 50% or more (Kesavan, figs 3-5).

As concern claim 10, the combination shows a leverage ratio from the line of symmetry to the contact point between the hood of the tine part and the holder part is equal to zero or less than the radius of the projection (Kesavan, 3-4).

As concern claim 12, the combination shows the radius for a respective recess is larger than the radius for a corresponding projection (Kesavan, fig 6).

As concern claim 13, the combination shows at least two rear contact zones are provided, which comprise a greater angle of inclination to the line of symmetry of an inner, longitudinal peripheral line Pi along the locking device opening through the beak than of an outer, collateral longitudinal peripheral line (Kesavan, fig 2 & 5).

As concern claim 14, the combination shows the various contact faces and roundings, several being comprise a plurality of different inclinations, conicities parallel but laterally offset (Kesavan, fig 3-5).

As concern claim 15, the combination shows torque loads caused by the rotation of the wearing and/or replacement part in relation to the holder part are designed to be absorbed directly or after a certain minor wear by at least one of the front contact zones in interaction with at least the the contact zones on the rear collateral joints (Kesavan fig 3-6).

Allowable Subject Matter

4. Claim 4 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection. Vinas Peya is a clear teaching

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with motivation to additionally modify Kesavan to include these collars as detailed above in the rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Beach whose telephone number is 571.272.6988. The examiner can normally be reached on Monday-Friday, 8:00am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Will can be reached on 571.272.6998. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas A. Beach

/Thomas A Beach/
Primary Examiner, Art Unit 3671

August 7, 2009

THOMAS A. BEACH
Primary Examiner
Group 3600